

least one of which contains a leader sequence forming a secretion signal, and (b) immunoglobulin polypeptides encoded by said nucleotide sequences.

22. The plant cell of claim 21 wherein the leader sequence is a heterologous leader sequence.

23. The plant cell of claim 21 wherein the nucleotide sequences are mammalian nucleotide sequences.

24. The plant cell of claim 21 wherein the immunoglobulin polypeptides is an immunoglobulin superfamily molecule.

25. The plant cell of claim 21 wherein the immunoglobulin polypeptides comprises an Fab fragment.

26. The plant cell of claim 21 wherein the immunoglobulin polypeptides comprises an Fv fragment.

27. The plant cell of claim 21 derived from a dicotyledonous plant.

28. The plant cell of claim 21 derived from a monocotyledonous plant.

29. The plant cell of claim 21 derived from a tobacco plant.

30. The plant cell of claim 21, wherein said nucleotide sequences encoding heavy- and light-chain polypeptides are included on separate vectors.

31. A plant cell containing (a) nucleotide sequences encoding an immunoglobulin product containing at least a portion of an immunoglobulin heavy chain and (b) the immunoglobulin product encoded by the nucleotide sequences.

32. The plant cell of claim 31 wherein the immunoglobulin product is a single-chain antigen-binding protein.

33. The plant cell of claim 31 wherein the immunoglobulin product comprises an immunoglobulin heavy chain.

34. The plant cell of claim 31 wherein the immunoglobulin product is capable of specifically binding to an antigen.

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35. The plant cell of claim 31 wherein the immunoglobulin product forms a binding site specific for a predetermined antigen.

36. The plant cell of claim 31 wherein the immunoglobulin product is an abzyme.

37. The plant cell of claim 31 wherein the immunoglobulin product comprises an Fab.

38. The plant cell of claim 31 wherein the immunoglobulin product comprises an Fab'.

39. The plant cell of claim 31 wherein the immunoglobulin product comprises an F(ab')2.

40. The plant cell of claim 31 wherein the immunoglobulin product comprises an Fv.

41. The plant cell of claim 31 wherein the immunoglobulin product contains a paratope.

42. The plant cell of claim 31 wherein the immunoglobulin product comprises a V<sub>H</sub> region.

43. The plant cell of claim 31 wherein the immunoglobulin product comprises one-half of an immunoglobulin molecule.

44. The plant cell of claim 31 wherein the immunoglobulin product comprises an antibody.

45. The plant cell of claim 31 wherein the plant is a dicotyledonous plant.

46. The plant cell of claim 31 wherein the plant is a monocotyledonous plant.

47. The plant cell of claim 31 wherein the plant is an alga.

48. The plant cell of claim 31 wherein the immunoglobulin product includes a J chain.

49. A plant cell containing (a) nucleotide sequences encoding one or more biologically functional glycopeptide multimers not normally produced by the plant and (b) the

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biologically functional glycopeptide multimers encoded by the nucleotide sequences.

50. The plant cell of claim 49 wherein the glycopeptide multimer includes a J chain.

51. The plant cell of claim 49 wherein the glycopeptide multimer comprises a polypeptide having a glycosylated core portion and N-acetylglucosamine containing outer branches.

52. The plant cell of claim 49 wherein the glycopeptide multimer comprises an antibody.

53. A plant cell containing (a) nucleotide sequences encoding an immunoglobulin product containing at least a portion of an immunoglobulin light chain and (b) the immunoglobulin product encoded by said nucleotide sequences.

54. The plant cell of claim 53 wherein the immunoglobulin product is a single-chain antigen-binding protein.

55. The plant cell of claim 53 wherein the immunoglobulin product comprises one-half an immunoglobulin molecule.

56. The plant cell of claim 53 wherein the immunoglobulin product comprises an immunoglobulin light chain.

57. The plant cell of claim 53 wherein the immunoglobulin product is an abzyme.

58. The plant cell of claim 53 wherein the immunoglobulin product comprises an Fab.

59. The plant cell of claim 53 wherein the immunoglobulin product comprises an Fab'.

60. The plant cell of claim 53 wherein the immunoglobulin product comprises an F(ab')2.

61. The plant cell of claim 53 wherein the immunoglobulin product comprises an Fv.

62. The plant cell of claim 53 wherein the immunoglobulin product comprises an antibody.